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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,707	10/11/2001	Daniel M. Giaquinta	1012-105(2000-111)	8403

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EXAMINER

WILKINS III, HARRY D

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 06/24/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/975,707

Applicant(s)

GIAQUINTA ET AL.

Examiner

Harry D Wilkins, III

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 17 is objected to because of the following informalities: "said multi-pin connector" lacks antecedent basis in claim 3. However, it appears that claim 17 should depend from claim 15, which would provide antecedent basis for all of the limitations. Further examination will be based upon this assumption. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14, 16, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donne (US 6,468,410) in view of Warren et al US 6,187,164).

Donne teaches (see abstract and figures 1-3) an electrochemical cell apparatus with a base (10) with a plurality of wells (18) defined therein. The cells each have at least two electrodes (22,32) disposed therein.

Donne does not teach a printed circuit board for individually electrically interfacing with each of said cells and circuitry for providing an electrical connection between an electrical source to power the electrodes in each cell.

Warren et al teach (see abstract and figures 1A, 1B, 3 and 4E) a printed circuit board for providing individual electrical communication paths (i.e.-circuitry) for providing

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connections between an electrical source and the electrochemical cell. The circuit board of Warren et al provides means for synthesizing and screening millions of new compositions at fast rates.

Therefore, it would have been obvious to one of ordinary skill in the art to have adapted the circuit board of Warren et al for use with the apparatus of Donne because the circuit board provides individual connections to each of a multitude of electrochemical cells providing for fast synthesizing and screening of new compositions. The connections (12) of Warren et al would be contacted to the lower ends of the working electrodes (22) of Donne. The placement of the circuit board adjacent to the second portion of the base would have been within the expected skill of a routineer in the art.

Though Donne teaches sequential testing of each of the electrochemical cells and, thus, only one counter-electrode that is moved from cell to cell, when combined with the circuit board of Warren et al, it would have been within the expected skill of a routineer in the art to have operated each of the cells at the same time in order to conduct the process at faster rates. In order to conduct all of the cells simultaneously, a counter-electrode would have been added to each of the cells.

Regarding claims 2, 4 and 14, Donne teaches (see col. 8, lines 63-64) that the power source used is a potentiostat/galvanostat.

Regarding claim 3, Donne teaches (see figure 2) that the wells have an associated first threaded portion (20) extending in an axial direction and a sheath assembly (28, 38 and 46) with a second threaded portion for engaging the first threaded

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portion. The sheath assembly of Donne includes a reference electrode (46) in a first sheath and a counter electrode (32). Donne does not teach that the counter electrode was in a sheath. Rather Donne teaches that a preferred embodiment is a mesh electrode for the counter electrode. However, it would have been within the expected skill of a routineer in the art to have adapted the counter electrode to be of any suitable type, such as another sheath electrode, similar to reference electrode 46.

Regarding claims 5 and 10, Donne teaches (see col. 4, lines 37-40) that each of the cells is provided with a (working) electrode and a counter electrode.

Regarding claims 6 and 11, Donne teaches (see col. 8, lines 31-33) that a reference electrode is added to each cell.

Regarding claims 7 and 18, the individually addressable electrical communication path of Warren et al includes circular metal conductors (12).

Regarding claim 8, the printed circuit board of Warren et al is fabricated separately from any other electrochemical cell apparatuses.

Regarding claims 9 and 19, Donne teaches (see figure 2) that a threaded assembly is used for projecting the electrodes into the well.

Regarding claim 12, the working electrode (22) of Donne was supported on a surface of a support member (20). The limitation "in spaced relation to said printed circuit board" is being interpreted to mean that the working electrodes are spaced such that the lower end of each electrode (22) meets with the contact (12) of the circuit board. Thus, Donne in view of Warren et al meets the limitations of this claim.

Regarding claim 13, it would have been obvious to one of ordinary skill in the art

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to have added a second circuit board as taught by Warren et al in order to provide individual control of the counter electrodes.

Regarding claim 16, it would have been within the expected skill of a routineer in the art to have adapted the positioning of the electrodes into any suitable position, such as generally parallel to each other. See MPEP 2144.04. VI. C for discussion of rearrangement of parts.

Regarding claim 20, it would have been within the expected skill of a routineer in the art to have disposed the second circuit board in any suitable position, such as in a generally opposing relation with the first circuit board. *See MPEP 2144.04. VI. C.*

4. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donne in view of Warren et al as applied to claims 1-14, 16 and 18-20 above, and further in view of Maynard (US 4,850,899).

The teachings of Donne in view of Warren et al are discussed above in paragraph no. 3.

However, Warren et al do not teach that the circuitry/traces originate at a single multi-pin connector. In fact Warren et al teach (see figure 1A) that the traces originate at multiple connections at the periphery of the circuit board.

Maynard teaches a multi-pin connector (see figure 3 and col. 4, lines 2-6) that utilizes a ribbon cable connection. The connector attaches to a circuit board and replaces the old style of connecting using the circuit board. This connector allows (see abstract) a cost and space savings compared to the old circuit board connection type.

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The connectors of Warren et al are equivalent to the old style circuit board connection discussed by Maynard.

Therefore, it would have been obvious to one of ordinary skill in the art to have substituted the connectors of Warren et al for a multi-pin connector as taught by Maynard because the multi-pin connector provides a cost and space savings over the prior art circuit board connections.

Regarding claim 17, Maynard teaches (see col. 4, line 6) that the connection was made by a ribbon cable.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D Wilkins, III whose telephone number is 703-305-9927. The examiner can normally be reached on M-Th 10:00am-8:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Harry D Wilkins, III  
Examiner  
Art Unit 1742

ROY KING   
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

hdw  
June 19, 2003